

DOCKET SECTION

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

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POSTAL RATE AND FEE CHANGES, 1997

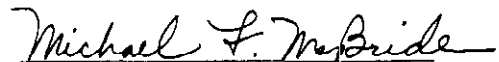
Docket No. R97-1

**RESPONSES OF
DOW JONES & COMPANY, INC. WITNESS SHEW TO
INTERROGATORIES OF
THE OFFICE OF THE CONSUMER ADVOCATE
(OCA/DJ-T1-1-7)
(February 11, 1998)**

Pursuant to the Commission's Special Rules of Practice, Dow Jones & Company, Inc. ("Dow Jones") hereby replies to the interrogatories posed by Office of the Consumer Advocate (OCA/DJ-T1-1-7) on January 28, 1998.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,



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February 11, 1998

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**RESPONSE OF DOW JONES & COMPANY, INC. WITNESS SHEW
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OCA/DJ-T1-1. Please refer to your testimony at pages 4 through 9.

- a. Recognizing that price and cost are normally measured by economists in dollar terms, did you find any dollar measurements in witness Bradley's testimony? If so, please explain.
- b. Do you have or are you aware of any study that shows that the use of labor hours is a meaningful measure of cost? If so, please identify the study.
- c. In discussing economic efficiency, economists usually discuss marginal revenues, prices, costs, etc. and provide a variety of general equilibrium economic efficiency conditions. It is on the basis of these conditions that economists have a theoretical basis for the analysis of efficiency, costs, and prices. Would these conditions be met if labor hours were assumed to be the costs? If so, please explain.

RESPONSE:

(a) In his investigation of the relationship between labor cost and output, Professor Bradley measures labor cost in terms of the hours of labor associated with various activities. For that reason, costs in his study are denominated in hours rather than dollars. His testimony is copious, and I cannot recall whether I found, incidentally, "any dollar measurements" in it.

(b) I am not aware of any study that shows that the use of labor hours either is or is not a meaningful measure of cost. I would be surprised if such a study exists. It seems evident that hours provides one meaningful measure of the labor cost of producing something, just as compensation provides another. The best measure of labor cost depends on such considerations as the intended use of the information and the nature of data available on labor costs.

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(c) This question is a little difficult for me to understand. The quantity of labor required to produce a service constitutes a real resource cost of the service. Knowing that resource cost can help to inform decisions about Postal Service investments and pricing that would promote economic efficiency. Postal Service costs consist overwhelmingly of labor, but Professor Bradley is not assuming that labor hours constitute the only cost of providing postal services.

Knowledge of the physical relation between output and hours of labor input may provide full information about marginal costs. For if an organization with a neoclassical production function (its inputs are substitutes for each other) is minimizing its costs, then the envelope theorem says that the marginal cost of a service is given by the wage rate multiplied by the labor hours required to produce one more unit of service.

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OCR/DJ-T1-2. On page 11, lines 15-16 of your testimony, you discuss factors that help explain costs. On page 18, lines 7-10 of your testimony, you state that for witness Bradley's study, "[I]ts usefulness as an analytic tool might be further expanded if, in future versions of the study, the labor cost of mail processing were measured in dollar terms as well as hours and if the investment in plant and equipment associated [with] each activity at each sight were included as explanatory variables." Given that economic theory focuses on labor, capital, and the price system, and given your statement that considerations of capital, prices, and costs are absent from witness Bradley's study, could it be assumed that the study presents a short-run cost estimating equation between labor hours and TPH?

RESPONSE:

My expectation is that the cost variabilities estimated by Professor Bradley come close to measuring the variability of mail processing costs over the long run. Professor Bradley's specification includes two variables that should capture impacts of technological change on the relation of labor to output. The variables are a (nonlinear) time trend and also, for some cost pools, a variable measuring the degree to which the mail stream has been rerouted from manual operations.

The period-to-period variations in cost and volume observed within a facility can be used to estimate the short-run and long-run variability of cost. In most of Professor Bradley's equations, labor hours are explained by contemporaneous output and also output in the previous period, and he sums those two effects to obtain his estimate of cost variability. That combined effect should approximate the variability of cost in the long run.

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OCA/DJ-T1-3 Given your concern over the absence of cost and investment data, please explain your reasoning leading to the statement on page 18, lines 11-13 of your testimony that “the size of the data sets and the thoroughness of the analysis provide ample reason to be confident that the results are reliable.”

RESPONSE:

I did not express “concern over the absence of cost and investment data....” Expressing concern is quite different from observing, as I did, that the study’s usefulness as an analytic tool might be further expanded if, in future versions of the study, the labor cost of mail processing were measured in dollar terms as well as hours and if the investment in plant and equipment associated each activity at each site were included as explanatory variables. I would not expect those specifications significantly to affect the estimated variability of mail processing cost.

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OCA/DJ-T1-4 Do you believe that witness Bradley has presented (1) a cost function or equation as defined by economists or (2) a cost estimating relationship between hours of labor and TPH based on operational factory floor data? Please explain your answer.

RESPONSE:

There are many meaningful types of cost functions consistent with the canons of economics. Professor Bradley has estimated one, relating the labor costs of mail processing activities, as measured by labor hours, to an index of output, usually total pieces of mail handled. The most appropriate cost function to estimate depends on the ultimate objective of the cost analysis and the nature of the data that are available. In light of the objective of measuring labor cost variability and the data available for that task, I see no grounds for criticizing Professor Bradley's choice.

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OCA/DJ-T1-5 On page 12, lines 17-18 of your testimony, you indicate that witness Bradley's large data sets make it extremely unlikely that the combinations of cost and scale that he observes are atypical. Are they typical for non-MODS offices? Please explain your answer.

RESPONSE:

When I remarked that the combinations of cost and scale observed by Professor Bradley are unlikely to be atypical, I made that comment in connection with evaluating his econometric estimates. He does not econometrically estimate cost functions for non-MODS offices, since there is currently no system for recording hours and piece-handling data for individual activities in non-MODS offices. Since the data for non-MODS offices do not exist, the question of adequacy of sample sizes for non-MODS offices does not arise. Professor Bradley's methodology calls for applying the average or system variability from MODS offices to non-MODS offices, and it is difficult to think of a better alternative given the absence of non-MODS data.

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OCA/DJ-T1-6 On page 12, line 9 of your testimony, you state, "Being able to observe the costs of many different scales of mail processing facilitates establishing the precise shape of the relationship between total pieces of mail handled and cost." Please define how you understand scale: whether it differs from TPH, whether scale of a facility is related to size and investment, and how you believe scale is related mail processing.

RESPONSE:

My testimony refers to the scale of mail processing, which is customarily measured by total pieces handled. Since that is the output measure that Professor Bradley uses to gauge the variability of mail processing costs, that is the scale variable whose variability within the sample affects the precision of his results.

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OCA/DJ-T1-7 You indicate on page 13, line 16 of your testimony that witness Bradley explains that accurate information on compensation in each mail processing activity was not readily available.

- a. On the basis of your understanding of data availability, given that hours are measured based on people clocking into operations by badge number or in other similar ways, do you have any information as to why dollar data would be unavailable? If so, please explain.
- b. As an economist, would you agree that the absence of cost data presents a problem in the development of a cost study? If you do not agree, please explain.
- c. As an economist, would you advocate gathering such data, possibly as a prelude to conducting a cost study? If you would not, please explain.

RESPONSE:

a. In my experience, information that one would like to have in estimating a cost function is often not available. Various reasons are given for that: it is not collected in a consistent way over time or across facilities, archived information had been disposed of or lost, the cost of recovering the information would be prohibitive, or the data cannot be interpreted properly without some other information that is missing. The particular data problems that arise in trying to measure labor costs at the pool level by labor compensation is something that OCA may want to discuss with Professor Bradley and Postal Service employees.

But even if compensation data were complete and readily accessible, using them instead of labor hours to estimate cost variability could be problematical. For it would necessitate constructing a satisfactory index of how the terms of compensation vary across facilities and

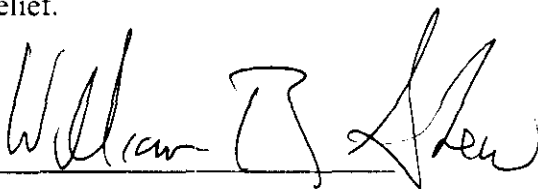
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through time, if the variability of labor cost with respect to output is to be accurately estimated. Constructing an accurate index of labor compensation can pose formidable problems, so it is by no means evident that, even if good data on labor compensation were readily available, they would provide a better basis than hours for estimating cost variability.

b. , c. It is difficult to study something quantitative in nature without any data. For that reason, if a decision is made to study a quantitative issue, collecting data would seem a sensible step. Quite what this has to do with Professor Bradley's study is not apparent to me, unless OCA feels that costs can only be denominated in money, and that the quantity of labor (e.g., labor hours) required to produce a service is somehow not a cost.

DECLARATION

I, William B. Shew, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information and belief.



A handwritten signature in cursive script, reading "William B. Shew", written over a horizontal line.

Date: 2/11/98

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of
- record in this proceeding in accordance with section 12 of the Rules of Practice.



Brenda Durham

Dated: February 11, 1998